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ONE HUNDRED FIFTEENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515–6115
Majority (202) 225–2927
Minority (202) 225–3641

March 31, 2017

The Honorable Gene L. Dodaro
Comptroller General of the United States
U.S. Government Accountability Office
441 G Street, N.W.
Washington, DC 20548

Dear Mr. Dodaro:

The Committee on Energy and Commerce is reviewing certain Department of Energy (DOE) management practices, with the goal of assessing whether the Department is implementing appropriate measures to carry out its missions efficiently and effectively. We are particularly interested in departmental decision-making concerning DOE's efforts to cost effectively address environmental liabilities while minimizing health and safety risks to the public and the environment—the importance of which were underscored by the Government Accountability Office (GAO) high-risk designation last month for federal environmental liabilities.[1]

DOE's Office of Environmental Management (EM) is responsible for remediating the environmental contamination attributable to the nation's nuclear weapons program. Since its inception in 1989, EM has spent more than $164 billion on this effort, and estimates that it will need approximately $257 billion to complete its mission. EM defines the bulk of its work as "operational activities," which include activities associated with the cleanup of liquid nuclear tank waste, stabilization and packaging of nuclear materials, and decommissioning and decontaminating closed nuclear facilities. EM's $5.4 billion defense-related cleanup request for fiscal year 2017 includes about $4.4 billion for operational activities and about $1 billion to fund the capital asset construction projects needed to support operational activities. The majority of the capital asset funding is to complete construction of nuclear facilities to process liquid nuclear tank waste at DOE's Hanford and Savannah River sites.

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[1] According to GAO, the federal government's environmental liability has been growing for the past 20 years and is likely to continue to increase. For fiscal year 2016, the federal government's estimated environmental liability was $447 billion—up from $212 billion for fiscal year 1997. DOE is responsible for 80% or $372 billion of these estimated liabilities, mostly related to nuclear waste cleanup. See GAO's High Risk Series Report, February 15, 2017, (GAO-17-317).

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DOE requires EM and its other program offices to manage capital asset projects in accordance with DOE's project management order. This order requires projects to establish cost and schedule goals and to pass through a series of critical decision points that include management review and approval to ensure that projects are meeting these goals. The order requires independent project reviews at certain decision points to ensure the reliability of cost and schedule goals.

However, while the capital asset projects are subject to the requirements of the project management order, EM's framework for managing and reporting progress for operational activities, does not appear to include performance requirements comparable to those used for capital projects. Given the enormous amount of cleanup work in the years ahead, we seek to understand whether EM is adequately assessing the performance of its cleanup projects and managing the majority of its annual budget as effectively and as efficiently as possible.

As part of your examination of EM, we would also like you to examine DOE's use performance assessments in its environmental cleanup decision-making. Performance assessments are the foundation of DOE's cleanup approaches at its sites.[2] Based in part on legal requirements but also with a degree of discretion, the assessments contribute to setting the functional requirements for cleanup decisions at EM sites. The National Academies' National Research Council has reported several times that the DOE's cleanup strategy could benefit from a risk-informed process—that is, a process that aligns cleanup approaches with the risk its cleanup obligations pose. In a 2005 report, the National Research Council found that an effective and credible risk-informed decision-making process is one that is consistent with current scientific knowledge and practice, reasonably independent of decision makers, and subjected to thorough independent peer review.[3] A 2011 National Research Council report asserted that by incorporating new science and technology, a cleanup program can increase efficiencies and reduce lifecycle costs and risk.[4]

It is unclear, however, whether and to what extent DOE's performance assessments reflect current scientific knowledge and allow for risk-informed decision-making processes to be used to help select cleanup approaches at DOE sites, in conjunction with other legally binding agreements. Participants of National Academies meetings have asserted that some information and models in certain DOE sites' performance assessments may be outdated, possibly overly conservative, and do not always reflect scientific advancements that have occurred in the decades

[2] DOE conducts performance assessments to evaluate the potential releases of radioactivity from disposal sites or facilities into the environment and any associated radiation doses at various points. Such assessments evaluate the impact of natural features and engineered barriers, among other measures, on the release of radioactivity and its potential public health impacts.

[3] The Committee on Risk-Based Approaches for Disposition of Transuranic and High-Level Radioactive Waste, National Research Council of the National Academies, Risk and Decisions About Disposition of Transuranic and High-Level Radioactive Waste (Washington, D.C.; National Academies Press, 2005).

[4] Committee on Waste Forms Technology and Performance, National Research Council of the National Academies, Waste Forms Technology and Performance: Final Report (Washington D.C.: National Academies Press, 2011). This study was performed at the request of DOE's Office of Environmental Management.

since certain performance assessments were completed.[5] As a result, the outdated performance assessments have and continue to influence functional requirements and associated decisions at cleanup sites without an accurate depiction of the risks associated with DOE's environmental cleanup responsibilities. In light of $370 billion environmental liability for DOE's future environmental remediation requirements, DOE may be missing opportunities to work with the states to make risk-informed decisions using current information that reflect scientific and technical advancements.

To assist us with these management-oversight inquiries, we request that GAO undertake an evaluation of the performance of EM's operational activities and the role of performance assessments in informing those activities. Specifically, we request that you evaluate the following key issues.

1. What DOE, EM, or other guidance governs EM's management of its operational activities?

2. How do EM managers assess operational activities?

3. How does EM measure cost and schedule performance of its operational activities and how well have these activities been performing in recent years?

4. To what extent have independent reviews been conducted of EM operational activities to ensure that these activities are being managed effectively?

5. Describe historical and current use of performance assessments at DOE sites, including the role of performance assessments in influencing DOE's cleanup decisions.

6. To what extent have performance assessments been updated to reflect advancements in science and modeling techniques?

7. What are other factors influencing DOE's cleanup decisions and how can those factors be integrated into a more risk-informed and efficient decision-making process?

Please have your staff work with Peter Spencer of the Majority Committee's staff, at (202) 225-2927, on the scope and details of your work.

Sincerely,

Greg Walden
Chairman
Committee on Energy and Commerce

Joe Barton
Vice Chairman
Committee on Energy and Commerce

[5] Committee on Best Practices for Risk-Informed Remedy Selection, Best Practices for Risk-Informed Decision-Making Regarding Contaminated Sites: Summary of a Workshop Series, National Research Council of the National Academies, (Washington, D.C.: 2014).

Fred Upton
Chairman
Subcommittee on Energy

John Shimkus
Chairman
Subcommittee on Environment

cc: The Honorable Frank Pallone, Jr., Ranking Member
Committee on Energy and Commerce

The Honorable Bobby L. Rush, Ranking Member
Subcommittee on Energy

The Honorable Paul Tonko, Ranking Member
Subcommittee on Environment